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(54) **NON-TRANSITORY COMPUTER-READABLE MEDIUM FOR SERVER**

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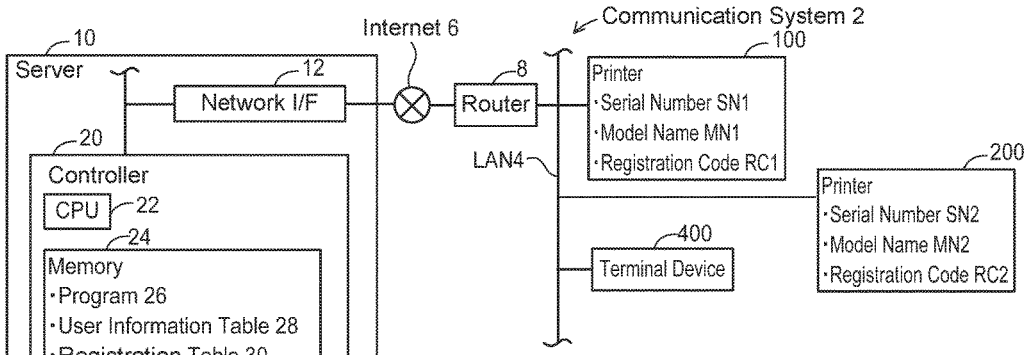
(57) **ABSTRACT**

A server may receive a first registration request including a first code from the communication device, the first code having been stored in advance in the communication device, if a second code is inputted into a terminal device, receive a second registration request including the second code from the terminal device, if one of the first and second registration requests is received, register target information including one code included in the one of the first and second registration requests in a memory such that a state of the target information is to be a first state where the server does not perform a target service, and if the other code in other one of the above registration requests matches the one code in the target information, change the state of the target information from the first state to a second state where the server performs the target service.



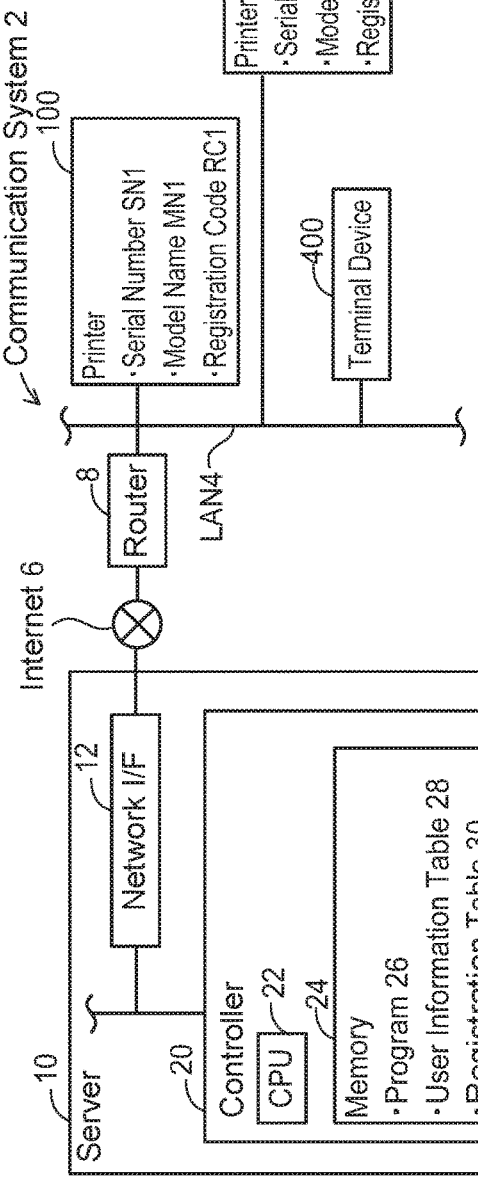
28

User Number	User Information		
	User Name	Password	Address Information
U1	UN1	P1	A1
:	:	:	:

30

Device Information			Status Information	User Number	Access Token	History Information
Serial Number	Model Name	Registration Code				
SN1	MN1	RC1	Final Registration	U1	AT1	HI1
SN3	MN3	RC3	Interim Registration	None	None	None
:	:	:	:	:	:	

FIG. 1



28

User Number	User Information		
	User Name	Password	Address Information
U1	UN1	P1	A1
:	:	:	:

30

Device Information			Status Information	User Number	Access Token	History Information
Serial Number	Model Name	Registration Code				
SN1	MN1	RC1	Final Registration	U1	AT1	HI1
SN3	MN3	RC3	Interim Registration	None	None	None
:	:	:	:	:	:	

FIG. 2

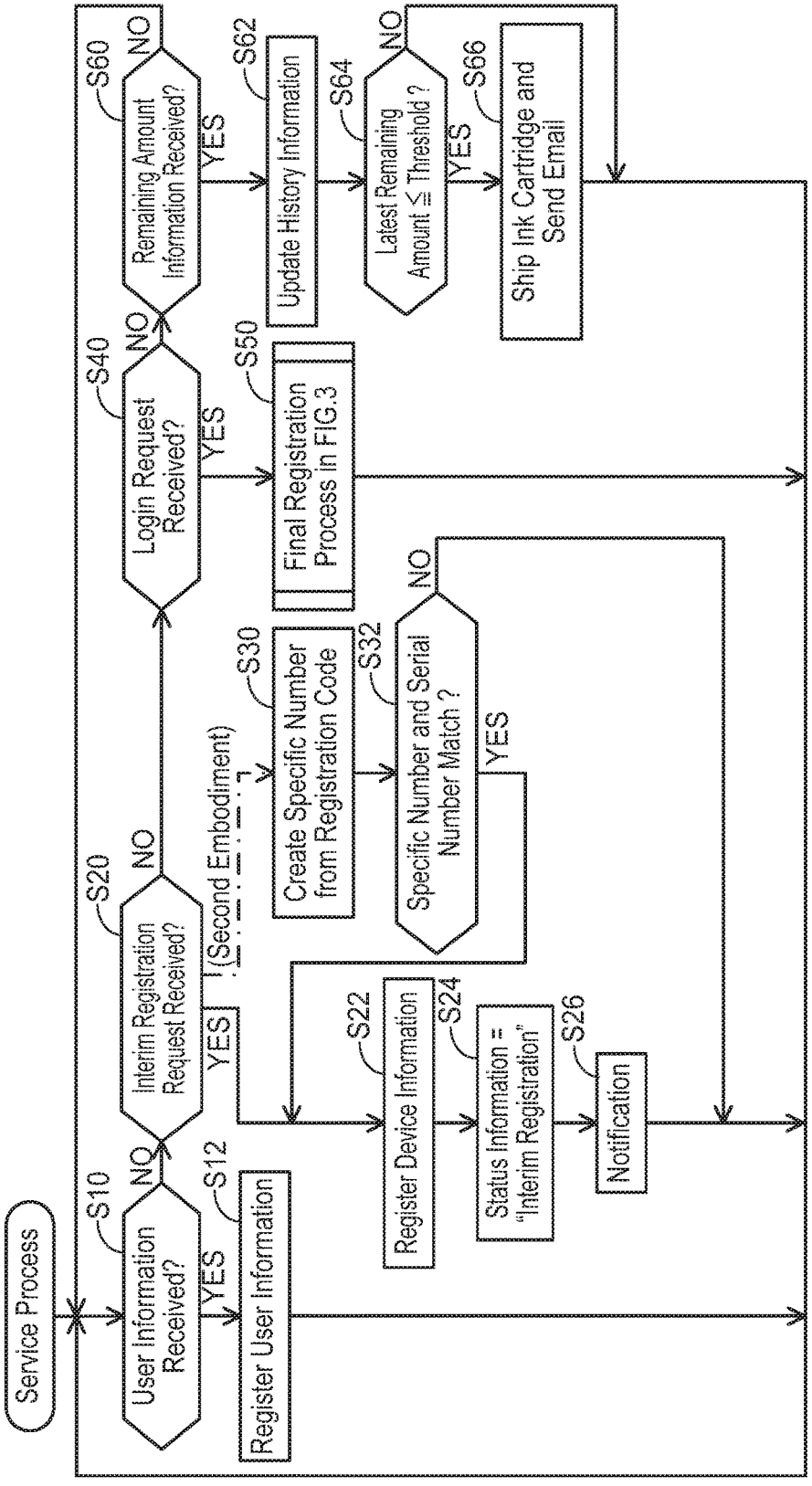

Service Process
S10
User Information Received?
NO
YES
S12
Register User Information
S20
Interim Registration Request Received?
NO
YES
!(Second Embodiment)
S30
Create Specific Number from Registration Code
S32
Specific Number and Serial Number Match ?
NO
YES
S22
Register Device Information
S24
Status Information = "Interim Registration"
S26
Notification
S40
Login Request Received?
NO
YES
S50
Final Registration Process in FIG.3
S60
Remaining Amount Information Received?
NO
YES
S62
Update History Information
S64
Latest Remaining Amount ≦ Threshold ?
NO
YES
S66
Ship Ink Cartridge and Send Email

FIG. 3

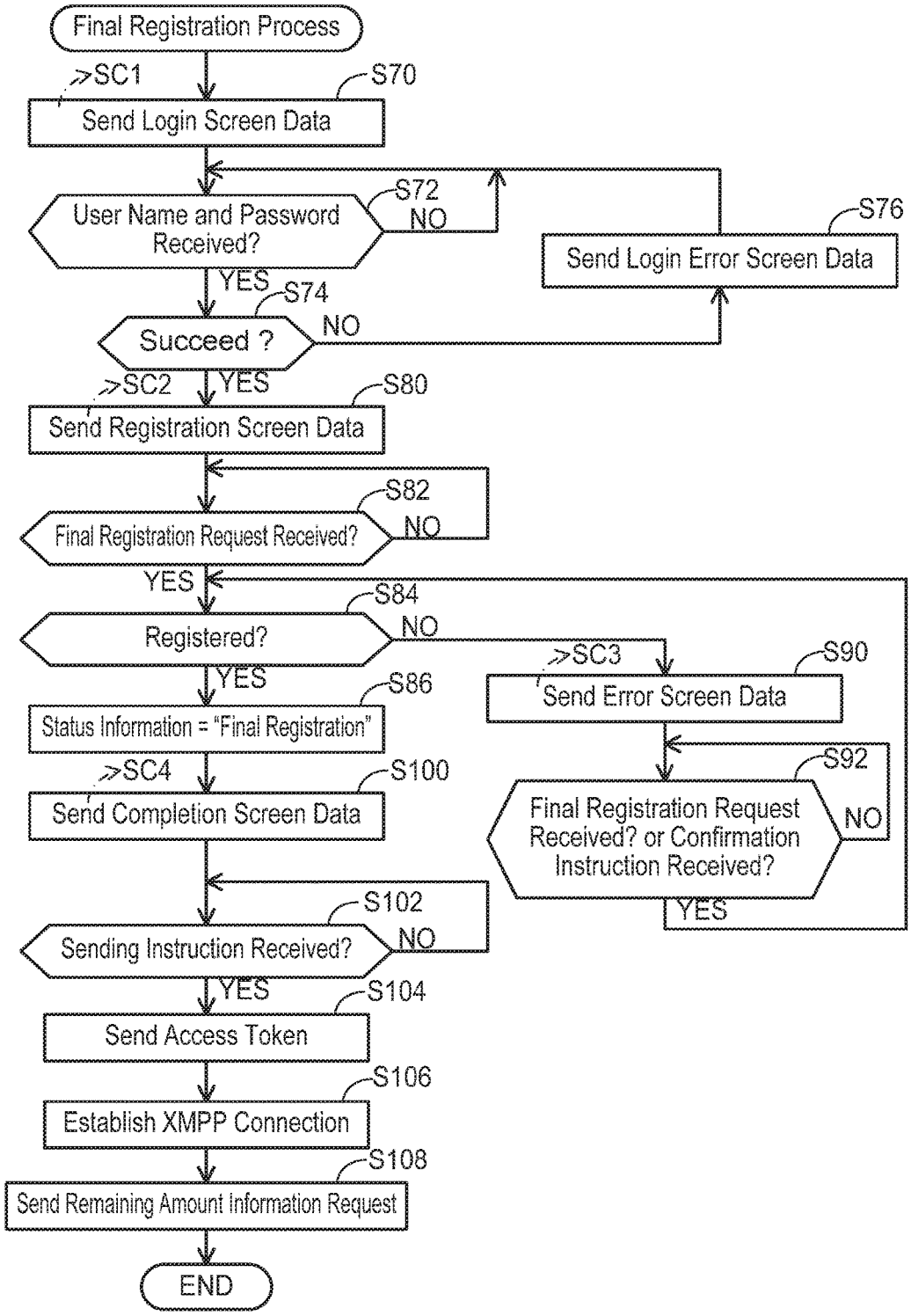

Final Registration Process
SC1
S70
Send Login Screen Data
User Name and Password Received?
S72
NO
YES
S76
Send Login Error Screen Data
S74
Succeed ?
NO
YES
SC2
S80
Send Registration Screen Data
S82
Final Registration Request Received?
NO
YES
S84
Registered?
NO
YES
SC3
S90
Send Error Screen Data
S86
Status Information = "Final Registration"
SC4
S100
Send Completion Screen Data
S92
Final Registration Request Received? or Confirmation Instruction Received?
NO
YES
S102
Sending Instruction Received?
NO
YES
S104
Send Access Token
S106
Establish XMPP Connection
S108
Send Remaining Amount Information Request
END

FIG. 4

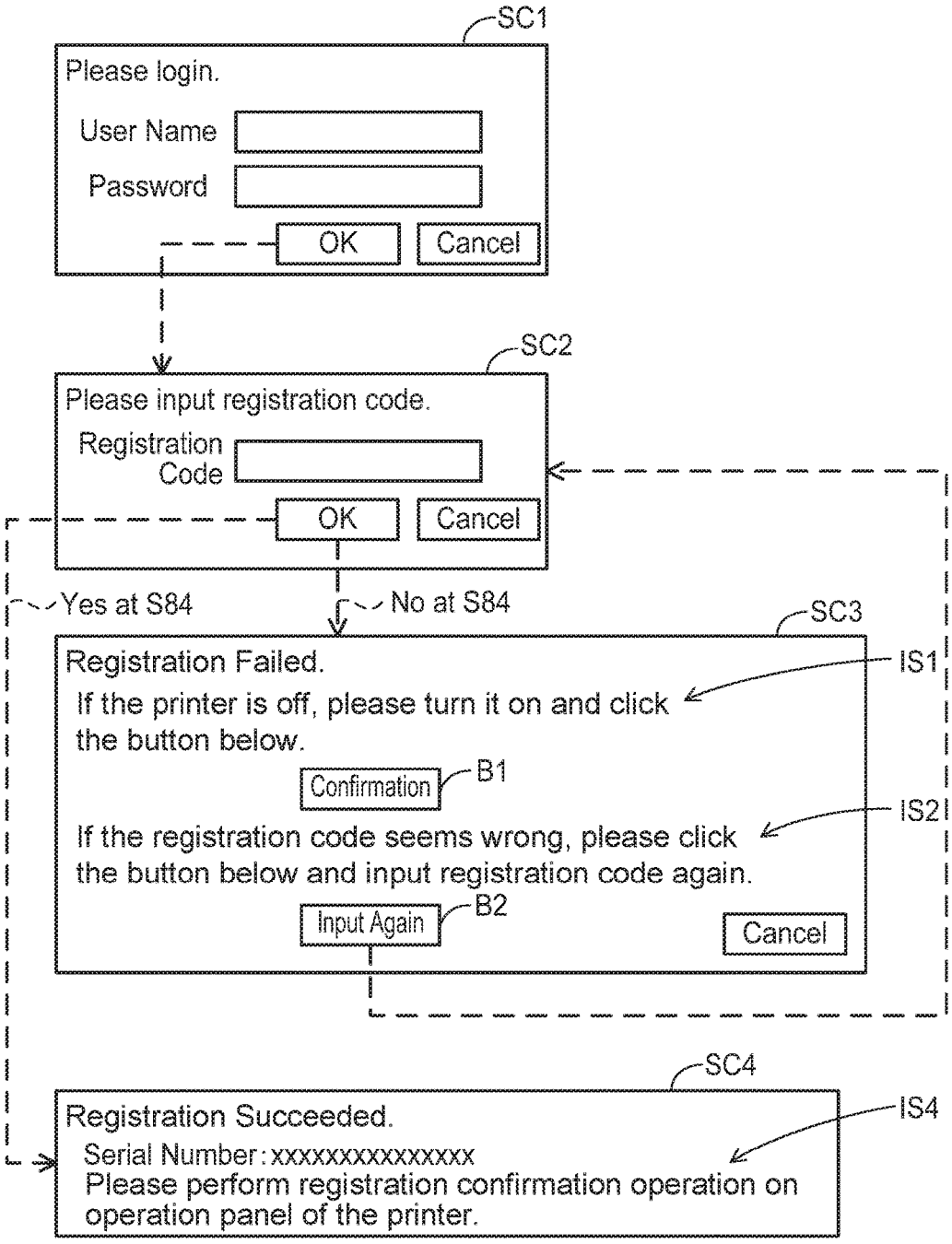

SC1
Please login.
User Name
Password
OK
Cancel
SC2
Please input registration code.
Registration Code
OK
Cancel
Yes at S84
No at S84
SC3
Registration Failed.
IS1
If the printer is off, please turn it on and click the button below.
Confirmation
B1
IS2
If the registration code seems wrong, please click the button below and input registration code again.
Input Again
B2
Cancel
SC4
Registration Succeeded.
IS4
Serial Number: xxxxxxxxxxxxxx
Please perform registration confirmation operation on operation panel of the printer.

FIG. 5 (First Embodiment: Case A)

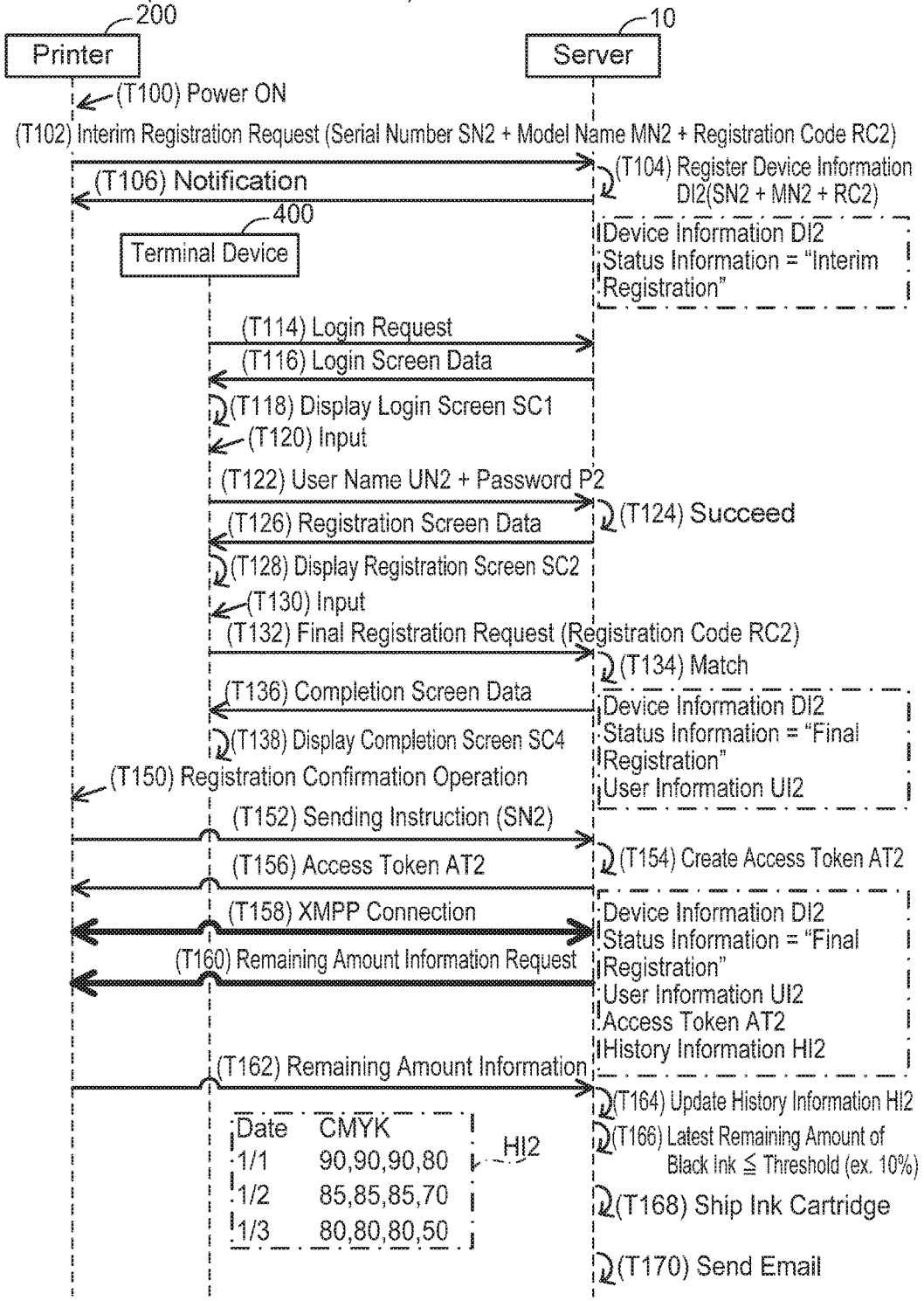


FIG. 6

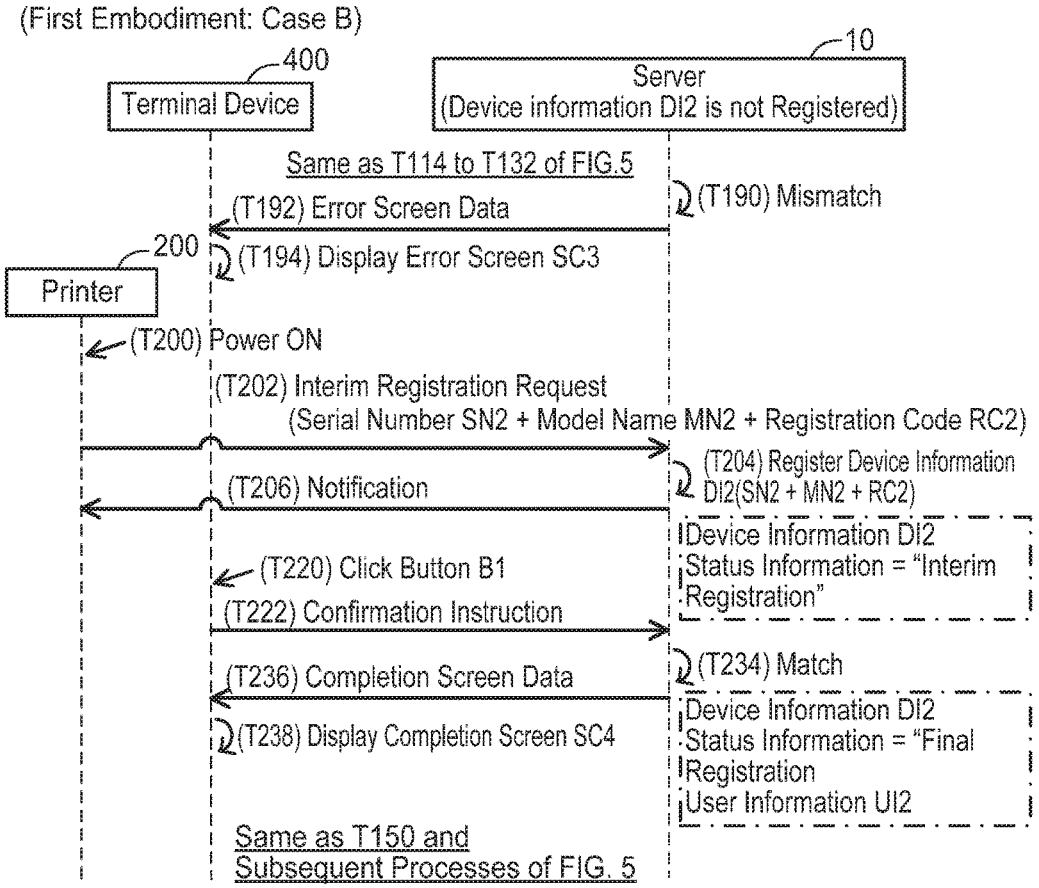
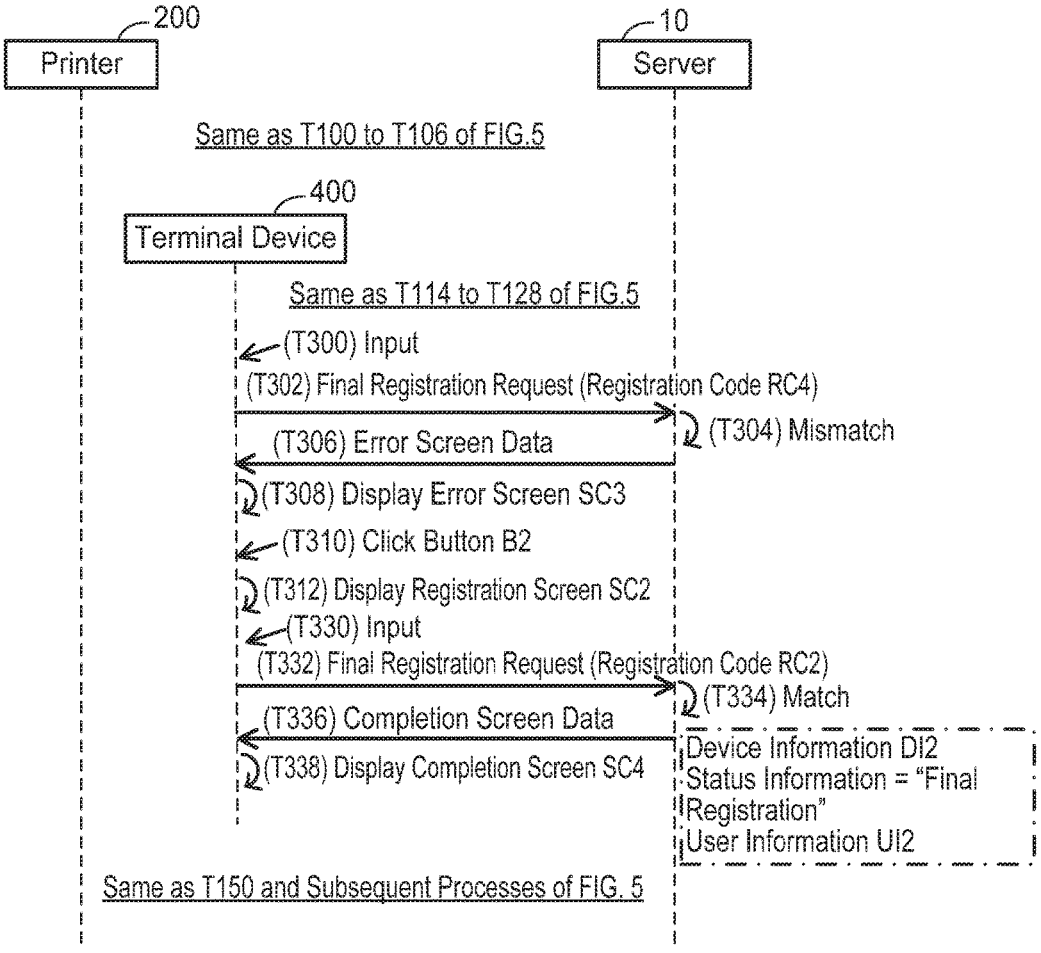

(First Embodiment: Case B)
400
Terminal Device
10
Server
(Device information DI2 is not Registered)
Same as T114 to T132 of FIG.5
(T190) Mismatch
(T192) Error Screen Data
200
(T194) Display Error Screen SC3
Printer
(T200) Power ON
(T202) Interim Registration Request
(Serial Number SN2 + Model Name MN2 + Registration Code RC2)
(T204) Register Device Information DI2(SN2 + MN2 + RC2)
(T206) Notification
Device Information DI2
Status Information = "Interim Registration"
(T220) Click Button B1
(T222) Confirmation Instruction
(T234) Match
(T236) Completion Screen Data
Device Information DI2
Status Information = "Final Registration
User Information UI2
(T238) Display Completion Screen SC4
Same as T150 and Subsequent Processes of FIG. 5

FIG. 7

(First Embodiment: Case C)



NON-TRANSITORY COMPUTER-READABLE MEDIUM FOR SERVER

TECHNICAL FIELD

[0001] The disclosure herein discloses a technique relating to a non-transitory computer-readable medium for realizing a server which is capable of executing a target service related to a communication device.

DESCRIPTION OF RELATED ART

[0002] A technique is known in which an interim registration of information for identifying an air conditioner is performed in a remote management server, and thereafter a final registration of the information is performed in the remote management server. Specifically, in a case of receiving, from an adapter for connecting the air conditioner to a LAN (abbreviation of Local Area Network), a MAC address for identifying the adapter and a keyword that is set in the adapter by a serviceman of the air conditioner, the remote management server stores the MAC address and the keyword in an interim state. Afterwards, in a case where a keyword is entered by the serviceman to a terminal device which is different from the air conditioner, the remote management server receives the keyword from the terminal device. Then, in a case where the stored keyword and the received keyword match each other, the remote management server stores the MAC address in a final registration state.

SUMMARY

[0003] In the aforementioned technique, the serviceman needs to set the keyword in the adapter to perform the final registration of the MAC address.

[0004] The present application provides a technique that reduces user's workload for registering target information including identification information of a communication device in a server.

[0005] A non-transitory computer-readable medium storing computer-readable instructions for a server, the computer-readable instructions, when executed by a processor of the server, may cause the server to execute: receiving a first registration request including identification information for identifying a communication device and a first code from the communication device via the Internet, the first code having been stored in advance in the communication device without being inputted to the communication device by a user of the communication device; in a case where a second code is inputted to a terminal device different from the communication device by the user, receiving a second registration request including the second code from the terminal device via the Internet; in a case where one of the first and second registration requests is received, registering target information including one code included in the one of the first and second registration requests in a memory such that a registration state of the target information is to be a first registration state the first registration state being a state where the server does not perform a target service which is related to the communication device; in a case where the other one of the first and second registration requests is received after the target information has been registered in the memory, determining whether the other code included in the other one of the first and second registration requests matches the one code included in the target information; in a case where it is determined that the other code matches the one code, changing the registration state of the target information from the first registration state to a second registration state, the second registration state being a state where the server performs the target service which is related to the communication device identified by the identification information included in the target information, wherein in a case where it is determined that the other code does not match the one code, the registration state of the target information is not changed from the first registration state to the second registration state; and in a case where the registration state of the target information is changed to the second registration state, performing the target service which is related to the communication device identified by the identification information included in the target information.

[0006] The server itself that is realized by the non-transitory computer-readable medium, and a control method of the server are also novel and useful.

BRIEF DESCRIPTION OF DRAWINGS

[0007] FIG. **1** show a configuration of a communication system and configurations of tables;

[0008] FIG. **2** shows a flowchart of a service process;

[0009] FIG. **3** shows a flowchart of a final registration process;

[0010] FIG. **4** shows screens displayed in a terminal device;

[0011] FIG. **5** shows a sequence representing a case A where device information is registered in a server;

[0012] FIG. **6** shows a sequence representing a case B where registration codes do not match each other; and

[0013] FIG. **7** shows a sequence representing a case C where registration codes do not match each other.

EMBODIMENTS

First Embodiment

[0014] (Configuration of a Communication System **2**; FIG. **1**)

[0015] Referring to FIG. **1**, a configuration of a communication system **2** will be described. The communication system **2** comprises a server **10**, printers **100** and **200**, and a terminal device **400**. The devices **100**, **200**, and **400** can communicate with one another via a LAN (abbreviation of Local Area Network) **4**. The LAN **4** is connected to the Internet **6** via a router **8**. The LAN **4** may be a wired LAN or a wireless LAN. The server **10** can communicate with each of the devices **100**, **200**, and **400** via the Internet **6**.

[0016] (Configurations of the Printers **100** and **200**)

[0017] The printer **100** is a peripheral device (i.e., a peripheral device of the terminal device **400**) comprising a color printing function. A serial number SN**1**, a model name MN**1**, and a registration code RC**1** are assigned to the printer **100**. When a vender of the printer **100** manufactures plural printers of the same model (i.e., the model name MN**1**), the vender determines a plurality of character strings including consecutive numbers as a plurality of serial numbers. Here, each of the serial numbers may further include alphabetical letter(s) and/or mark(s) (e.g., hyphen, etc.). The vender further determines a plurality of character strings which are randomly set as a plurality of registration codes. At this occasion, the vender determines the plurality of registration codes such that the registration codes do not duplicate with one another. Thus, each of the serial numbers and the

registration codes is a unique character string. Notably, compared to the serial numbers, the registration codes are character strings relatively easier for a user to input (e.g., character strings constituted only of numbers). Further, a number of letters constituting each registration code is less than a number of letters constituting each serial number. The registration codes are used to register various pieces of information including the serial numbers in the server **10**.

[0018] The vender assigns the serial number SN**1** and the registration code RC**1** to the printer **100** among the plural printers. The respective pieces of information SN**1**, MN**1**, and RC**1** are stored in the printer **100**, when the printer **100** is manufactured. That is, the respective pieces of the information SN**1**, MN**1**, and RC**1** are stored in advance in the printer **100** by the time when the printer **100** is shipped. In other words, the respective pieces of information SN**1**, MN**1**, and RC**1** are stored in advance in the printer **100** without being inputted by the user of the printer **100** into the printer **100**. Notably, the serial number, the model name, and the registration code may be collectively termed "device information" below.

[0019] Further, a sheet on which the registration code RC**1** is described is shipped together with the printer **100**. For example, the sheet may be a sticker affixed on a surface of the printer **100**, or an operating manual of the printer **100**. Thereby, the user of the printer **100** is able to know the registration code RC**1** by checking the sheet. Notably, in a variation, in a case where the printer **100** receives a predetermined operation, the printer **100** may print the sheet on which the registration code RC**1** is described. Further, in another variation, a terminal device (e.g., the terminal device **400**) connected to the LAN **4** may request the registration code RC**1** to the printer **100**, receive the registration code RC**1** from the printer **100**, and display the received registration code RC**1**. In the this variant especially, the printer **100** may function as a web server, and the terminal device **400** may access the web server in the printer **100** by using a browser program and receive the registration code RC**1** from the printer **100**. In both of the variations, the user is able to know the registration code RC**1**.

[0020] The printer **200** is a printer of a model different from the model of the printer **100** and stores a serial number SN**2**, a model name MN**2**, and a registration code RC**2** in advance. Further, a sheet on which the registration code RC**2** is described is shipped together with the printer **200**.

[0021] (Configuration of the Server **10**)

[0022] The server **10** is a server for providing a target service (e.g., shipping ink and sending an email to be described later) related to each of the printers **100** and **200** to users of the printers **100**, **200** and the like. The server **10** is set up on the Internet **6** by the vender of the printer **100**. Notably, in a variation, the server **10** may be set up on the Internet **6** by a business entity different from the vender.

[0023] The server **10** comprises a network interface **12** and a controller **20**. Each of the network interface **12** and the controller **20** is connected to a bus line (not shown). Notably, the interface will be described as "I/F" below. The controller **20** comprises a CPU **22** and a memory **24**. The CPU **22** executes various processes in accordance with a program **26** stored in the memory **24**. The memory **24** is constituted of a volatile memory, a non-volatile memory, and the like. The memory **24** stores, other than the program **26**, a user information table **28** and a registration table **30**. Notably, in a variation, the user information table **28** and the registration table **30** may be stored in an external memory that is communicably connected to the server **10**.

[0024] (Configuration of the User Information Table **28**; FIG. **1**)

[0025] Referring to FIG. **1**, a configuration of the user information table **28** will be described. One or more pieces of user information are registered in the user information table **28**. Each of the user information includes a user name (e.g., "UN**1**") for identifying a corresponding user, a password (e.g., "P**1**"), and address information (e.g., "A**1**"). Each of the address information includes an email address and a street address of its corresponding user. Each of the user information is associated with a unique user number for identifying the user information.

[0026] (Configuration of the Registration Table **30**; FIG. **1**)

[0027] Referring to FIG. **1**, a configuration of the registration table **30** will be described. One or more pieces of device information are registered in the registration table **30**. Each device information includes a serial number (e.g., "SN**1**"), a model name (e.g., "MN**1**"), and a registration code (e.g., "RC**1**"). Each of the device information is associated with status information, a user number, an access token, and history information. Notably, in a variation, each of the device information may not include a model name

[0028] Each of the status information indicates a registration state of the associated device information. The registration state indicates an interim registration state or a final registration state. In the interim registration state, the user number, the access token, and the history information are not associated with the device information (e.g., see device information including "SN**3**"). In the interim registration state, the server **10** does not execute a target service related to a printer identified by the serial number included in the device information. On the other hand, in the final registration state, the user number, the access token, and the history information are associated with the device information (e.g., see device information including "SN**1**"). In the state where the user number is associated with the device information (i.e., in the final registration state), the device information (e.g., device information including "SN**1**") and user information identified by the user number (e.g., user information including "UN**1**") are associated with each other via the user number (e.g., "U**1**"). In the final registration state, the server **10** executes the target service related to the printer identified by the serial number included in the device information.

[0029] The access token is information for establishing various connections via the Internet **6** between the server **10** and the printer. The connections include, for example, an XMPP (abbreviation of Extensible Messaging and Presence Protocol) connection, an HTTPS (abbreviation of Hypertext Transfer Protocol Secure) connection, and the like. Notably, the XMPP connection is a so-called constant connection, which continues to be established until power of the printer **100** is turned off. By using the XMPP connection, the server **10** can send a request to the printer passing through a firewall of the LAN which the printer belongs to (e.g., a firewall formed by the router **8**) without receiving a request from the printer. Notably, the mechanism that sends the request from the server **10** to the printer may not be the XMPP connection but may be another method.

[0030] The history information is information indicating a history of remaining amount information of the printer. The

remaining amount information is information indicating remaining amounts of respective colors of ink (e.g., CMYK) in the printer.

[0031] (Service Process: FIG. **2**)

[0032] Referring to FIG. **2**, a service process which the CPU **22** of the server **10** executes in accordance with the program **26** will be described. The service process is triggered by the power of the server **10** being turned on. In the service process, each monitoring step S**10**, S**20**, S**40**, and S**60** is executed sequentially.

[0033] In S**10**, the CPU **22** monitors receiving user information from the terminal device (e.g., the terminal device **400**) via the Internet **6**. In a case of receiving the user information together with a request for registering a new user, the CPU **22** determines YES in S**10** and proceeds to S**12**.

[0034] In S**12**, the CPU **22** creates a new user number, and registers the user number and the received user information in association with each other in the user information table **28**. When S**12** ends, the CPU **22** returns to S**10**.

[0035] In S**20**, the CPU **22** monitors receiving an interim registration request from the printer (e.g., the printer **200**) via the Internet **6**. The interim registration request is a request including device information of the printer, and is for registering the device information in the registration table **30**. In a case of receiving the interim registration request, the CPU **22** determines YES in S**20** and proceeds to S**22**.

[0036] Notably, the printer sends the interim registration request to the server **10** when both conditions of the printer being connected to the Internet via the LAN **4** and the router **8**, and electrical power being supplied to the printer are fulfilled. That is, the printer sends the interim registration request to the server **10**, for example, upon when the power of the printer is turned on while a LAN cable is connected thereto. Further, the printer sends the interim registration request to the server **10** upon when the LAN cable is connected to the printer while the power of the printer is turned on. Since the user does not need to perform a particular operation for sending the interim registration request at the printer, workload of the user can be reduced. Notably, in a variation, the printer may send the interim registration request to the server **10** in a case of accepting a predetermined operation performed by the user. Notably, in a variation, the printer may send the interim registration request to the server **10** upon when a setting of a wireless LAN for the printer is completed (i.e., upon when the printer is connected to the wireless LAN) while the power of the printer is turned on.

[0037] In S**22**, the CPU **22** registers the device information included in the received interim registration request in the registration table **30**. Then, in S**24**, the CPU **22** associates the device information registered in S**22** with the status information indicating the interim registration status. In S**26**, the CPU **22** sends a notification which indicates that the interim registration of the device information has been completed to the printer from which the interim registration request was sent in S**20**. Due to this, the CPU **22** can have the printer display a screen indicating that the interim registration has been completed. When S**26** ends, the CPU **22** returns to S**10**. Notably, in a case where device information that matches the device information included in the received interim registration request is already registered in the registration table **30**, the CPU **22** does not register the received device information in the registration table **30**.

[0038] In S**40**, the CPU **22** monitors receiving a login request from the terminal device (e.g., the terminal device **400**) via the Internet **6**. The login request is a request for logging in the server **10**. In a case of receiving the login request, the CPU **22** determines YES in S**40** and proceeds to S**50**. In S**50**, a final registration process (see FIG. **3**) is executed. When the final registration process in S**50** ends, the CPU **22** returns to S**10**.

[0039] In S**60**, the CPU **22** monitors receiving the remaining amount information from the printer (e.g., the printer **200**) via the Internet **6**. In a case of receiving the remaining amount information, the CPU **22** determines YES in S**60** and proceeds to S**62**. In S**62**, the CPU **22** updates the history information which is associated with the device information including the serial number of the printer received together with the remaining amount information by adding the remaining amount information to the history information.

[0040] Next, in S**64**, the CPU **22** determines whether or not at least one of remaining amounts of four colors of ink included in the latest remaining amount information of the updated history information is equal to or less than a threshold (e.g., 10%). In a case of determining that all of the remaining amounts of the four colors of ink are larger than the threshold (NO in S**64**), the CPU **22** skips S**66** and returns to S**10**. Notably, another determination may be executed in S**64**. For example, the CPU **22** may determine YES in S**64** in a case where it is determined that a change in one or more of the ink remaining amounts is equal to or larger than a threshold.

[0041] On the other hand, in a case of determining that at least one of the remaining amounts of the four colors of ink is equal to or less than the threshold (YES in S**64**), in S**66**, the CPU **22** executes a process for arranging shipping of the color ink the remaining amount of which is equal to or less than the threshold. Specifically, the CPU **22** firstly identifies, from the registration table **30**, the user number associated with the device information including the serial number which was received in S**60**, and subsequently identifies, from the user information table **28**, the address information included in the user information associated with the user number. The CPU **22** further identifies, from the registration table **30**, the model name associated with the serial number which was received in S**60**, and identifies a kind of ink cartridge used in the printer having the identified model name Then, the CPU **22** executes the process for arranging the shipping of the identified ink cartridge to the street address included in the identified address information. The CPU **22** further sends, to the email address included in the identified address information, an email indicating that the shipping is completed. When S**66** ends, the CPU **22** returns to S**10**.

[0042] (Final Registration Process: FIG. **3**)

[0043] Referring to FIG. **3**, the final registration process executed in S**50** of FIG. **2** will be described. In S**70**, the CPU **22** sends login screen data to the terminal device (e.g., the terminal device **400**). Due to this, in the terminal device, a login screen SC**1** (see FIG. **4**) represented by the login screen data is displayed. The login screen SC**1** includes an input field for input a user name and a password. In a case of accepting an operation of selecting (e.g., clicking) an OK button after a user name and a password have been inputted in the input field, the terminal device sends the user name and the password to the server **10**.

[0044] In S**72**, the CPU **22** monitors receiving the user name and the password from the terminal device. In a case of receiving the user name and the password (YES in S**72**), in S**74**, the CPU **22** executes an authentication of the received user name and password. In a case where a combination of the received user name and password is registered in the user information table **28**, the CPU **22** determines that the authentication succeeded (YES in S**74**) and proceeds to S**80**.

[0045] On the other hand, in a case where the combination is not registered in the user information table **28**, the CPU **22** determines that the authentication failed (NO in S **74**), and in S**76**, sends login error screen data to the terminal device. Due to this, a screen represented by the login error screen data (i.e., screen indicating the failure of login) is displayed in the terminal device, and then the login screen SC**1** is displayed again. When S**76** ends, the CPU **22** returns to S**72**.

[0046] In S**80**, the CPU **22** sends registration screen data to the terminal device. Due to this, a registration screen SC**2** (see FIG. **4**) represented by the registration screen data is displayed in the terminal device. The registration screen SC**2** includes an input field for entering a registration code. In a case of accepting an operation of selecting an OK button after a registration code has been inputted in the input field, the terminal device sends a final registration request including the registration code (referred to as "target registration code" below) to the server **10**.

[0047] In S**82**, the CPU **22** monitors receiving the final registration request from the terminal device. In a case of receiving the final registration request (YES in S**82**), in S**84**, the CPU **22** determines whether or not a registration code that matches the target registration code included in the final registration request is registered in the registration table **30**. In a case of determining that the registration code is registered (YES in S**84**), the CPU **22** proceeds to S**86**, while in a case of determining that the registration code is not registered (NO in S**84**), the CPU **22** proceeds to S**90**.

[0048] In S**86**, in the registration table **30**, the CPU **22** changes status information associated with device information including the target registration code (referred to as "target device information" below) from the interim registration status to the final registration status. Further, the CPU **22** identifies, from the user information table **28**, a user number associated with the user information the authentication of which succeeded in S**74**. Then, the CPU **22** registers the identified user number in association with the target device information in the registration table **30**. Due to this, the user information is associated with the target device information.

[0049] Next, in S**100**, the CPU **22** sends completion screen data to the terminal device. Due to this, a completion screen SC**4** (see FIG. **4**) represented by the completion screen data is displayed in the terminal device. The completion screen SC**4** includes a message indicating that a final registration of the printer has been completed. The completion screen SC**4** further includes an operation instruction IS**4** for encouraging the user to perform a registration confirmation operation on an operation panel of the printer (e.g., the printer **200**). The registration confirmation operation is an operation for causing the printer to send a sending instruction to the server **10**. The sending instruction is an instruction for causing the server **10** to send an access token.

[0050] In S**102**, the CPU **22** monitors receiving the sending instruction from the printer. In a case of receiving a sending instruction including the serial number of the printer (YES in S**102**), in S**104**, the CPU **22** creates an access token and sends the created access token to the printer. Further, the CPU **22** identifies the target device information including the serial number included in the sending instruction from the registration table **30**, and registers, in the registration table **30**, the created access token in association with the identified target device information. Notably, in a variation, the access token may be created before the determination of YES in S**102**, and may be registered in association with the target device information in the registration table **30**.

[0051] In S**106**, the CPU **22** establishes the XMPP connection with the printer. Specifically, in a case of receiving a connection request including an access token from the printer, the CPU **22** determines whether or not the access token is registered in the registration table **30**. Then, in a case of determining that the access token is registered, the CPU **22** sends a connection response for the connection request to the printer. As a result, the XMPP connection is established between the server **10** and the printer, which enables the server **10** to send a request to the printer. Notably, in a case of determining that the access token is not registered, the CPU **22** sends an error response for the connection request to the printer. In this case, the XMPP connection is not established.

[0052] In S**108**, the CPU **22** sends a remaining amount information request to the printer by using the XMPP connection established in S**106**. The remaining amount information request is a command for requesting the printer to periodically send the remaining amount information. Due to this, the server **10** can receive the remaining amount information from the printer (YES in S**60** of FIG. **2**). When S**108** ends, the final registration process ends.

[0053] Notably, the CPU **22** can send a remaining amount information request again to the printer after having sent the remaining amount information request to the printer in S**108**. The remaining amount information request includes interval information indicating a time interval (e.g., 1 day), color information indicating a color of ink (e.g., all colors, or specific color(s)), etc. The printer periodically sends, at the time interval indicated by the interval information (e.g., every day), the remaining amount information indicating remaining amount(s) of the color(s) of ink as indicated by the color information. Here, the interval information and the color information can be changed by an administrator of the server **10**. In a case where at least one of the pieces of information is changed after the remaining amount information request was sent in S**108**, the CPU **22** sends a remaining amount information request including the changed pieces of information again to the printer by using the XMPP connection established in S**106**. That is, the server **10** can send, by using the XMPP connection, the remaining amount information request to the printer again without receiving a request from the printer.

[0054] Further, in the case of determination of NO in S**84**, in S**90**, the CPU **22** sends error screen data to the terminal device. Due to this, an error screen SC**3** (see FIG. **4**) represented by the error screen data is displayed at the terminal device. The error screen SC**3** includes two instructions IS**1** and IS**2** respectively corresponding to two causes by which the determination of NO could be made in S**84** resulting from an absence of registration of the target registration code in the registration table **30**. One of the two causes is that the server **10** has not received the interim

registration request including the target registration code from the printer (i.e., S20 to S26 of FIG. 2 have not been executed). The instruction IS1 corresponding to the one of the two causes includes a message for encouraging the user to select a button B1 after turning on the power of the printer. In a case of accepting the operation of selecting the button B 1, the terminal device sends a confirmation instruction to the server 10. The confirmation instruction is an instruction for causing the server 10 to execute the determination of S84 again. Further, the other one of the two causes is that the target registration code is not correct. The instruction IS2 corresponding to the other one of the two causes includes a message for encouraging the user to input the registration code again. In a case of accepting the user operation of selecting a button B2, the terminal device displays the registration screen SC2 again. Due to this, the user can input the registration code again in the registration screen SC2. As a result, a final registration request including the registration code is sent to the server 10 again from the terminal device.

[0055] Next, in S92, the CPU 22 monitors receiving the confirmation instruction from the terminal device in response to the selection of the button B1, and receiving the final registration request from the terminal device in response to the selection of the button B2. In a case of receiving the confirmation instruction or the final registration request, the CPU 22 determines YES in S92, and returns to S84.

[0056] (Exemplary Case A: FIG. 5)

[0057] Referring to FIG. 5, an exemplary case A realized by the processes of FIGS. 2 and 3 will be described. In an initial state of the present case, the printer 200 is connected to the LAN 4 and has not been turned on even once, since shipped.

[0058] In T100, the user turns on the power of the printer 200. In this case, in T102, the printer 200 sends the interim registration request including the serial number SN2, the model name MN2, and the registration code RC2 to the server 10.

[0059] When receiving the interim registration request of T102 from the printer 200 (YES in S20 of FIG. 2), in S104, the server 10 registers, in the registration table 30, device information DI2 including each information SN2, MN2, and RC2 in the interim registration request (S22). At this occasion, the status information indicating the interim registration state is associated with the device information DI2 (S24). In T106, the server 10 sends the notification indicating that the interim registration has been completed to the printer 200 (S26).

[0060] Although not shown, in a case where the user wishes to register user information UI2, the server 10 receives, from the terminal device 400, the user information UI2 inputted to the terminal device 400 by the user (YES in S10 of FIG. 2). The user information UI2 includes a user name UN2, a password P2, and address information A2. The server 10 registers the received user information UI2 in the user information table 28 (S12). The process of registering the user information UI2 is executed prior to T114.

[0061] In a case where the user wishes the final registration of the printer 200 after the user information UI2 has been registered in the server 10, in T114, the terminal device 400 sends the login request to the server 10.

[0062] In T116, when receiving the login request of T114 from the terminal device 400 (YES in S40), the server 10 sends the login screen data to the terminal device 400 (S70 of FIG. 3).

[0063] In T118, the terminal device 400 displays the login screen SC1, and in T120, accepts the operation of inputting the user name UN2 and the password P2. In this case, in T122, the terminal device 400 sends each piece of the information UN2 and P2 to the server 10.

[0064] When receiving the information UN2 and P2 of T122 from the terminal device 400 (YES in S72 of FIG. 3), in T124, the server 10 determines that the authentication succeeded (YES in S74), and in T126, sends the registration screen data to the terminal device 400 (S80).

[0065] In T128, the terminal device 400 displays the registration screen SC2, and in T130, accepts the operation of inputting the registration code RC2. In this case, in T132, the terminal device 400 sends the final registration request including the registration code RC2 to the server 10.

[0066] When receiving the final registration request of T132 from the terminal device 400 (YES in S82), in T134, the server 10 determines that a registration code which matches the registration code RC2 included in the final registration request is registered in the registration table 30 (YES in S84). In this case, the server 10 changes the status information associated with the device information DI2 including the registration code RC2 from the interim registration state to the final registration state (S86), and associates the user information UI2 with the device information DI2 (S86). In T136, the server 10 sends the completion screen data to the terminal device 400 (S100).

[0067] In T138, the terminal device 400 displays the completion screen SC4. Due to this, in T150, the user performs the registration confirmation operation on the printer 200. In this case, in T152, the printer 200 sends the sending instruction including the serial number SN2 to the server 10.

[0068] When receiving the sending instruction of T152 from the printer 200, in T154, the server 10 creates an access token AT2 and registers the access token AT2 in association with the device information DI2 (S104). Then, in T156, the server 10 sends the access token AT2 to the printer 200 (S104). Here, the server 10 sends the access token AT2 to the printer 200 in response to the sending instruction of T152 from the printer 200. Due to this, without using the XMPP connection, the server 10 can send the access token AT2 to the printer 200 passing through a firewall of the LAN 4. As a result, in T158, by using the access token AT2, the XMPP connection is established between the server 10 and the printer 200. Notably, in FIG. 5, a communication related to the XMPP connection is shown with a bold line. Then, in T160, the server 10 sends the remaining amount information request to the printer 200 by using the established XMPP connection.

[0069] When the remaining amount information is to be sent to the server 10 after the remaining amount information request has been received, the printer 200 establishes an HTTPS connection with the server 10 by using the access token AT2. Then, in T162, the printer 200 sends the remaining amount information to the server 10 by using the established HTTPS connection. In response to receiving the remaining amount information request once, the printer 200 periodically (e.g., every day) sends the remaining amount information to the server 10.

[0070] When receiving the remaining amount information of T**162** from the printer **200** (YES in S**60** of FIG. **2**), in T**164**, the server **10** updates history information HI**2** by adding the remaining amount information to the history information HI**2** (S**62**). Then, in T**166**, the server **10** determines that a remaining amount of black ink in the latest remaining amount information is equal to or less than the threshold of 10% (YES in S**64**). In this case, in T**168**, the server **10** executes the process for arranging the shipping of an ink cartridge of the black ink to a street address of the address information A**2** included in the user information UI**2** which is associated with the device information DI**2** (S**66**). Further, in T**170**, the server **10** sends an email indicating that the ink cartridge has been shipped to an email address of the address information A**2** (S**66**).

[0071] As described above, in the case of receiving the interim registration request from the printer **200**, the server **10** registers in an interim manner the device information DI**2** including the serial number SN**2** and the registration code RC**2** in the registration table **30** (T**104**). Then, in the case where the final registration request is received from the terminal device **400** and the registration code RC**2** included in the final registration request matches the registration code RC**2** in the registration table **30**, the server **10** registers in a final manner the device information DI**2** in the registration table **30** (T**134**). As described above, the registration code RC**2** is stored in advance in the printer **200**, without being inputted in the printer **200** by the user. Therefore, there is no need for the user to input the registration code RC**2** to the printer **200** to register the device information DI**2** in the server **10**. Compared to an operation portion (e.g., a mouse and a keyboard) of the terminal device **400** or the like, inputting information to the operation panel of the printer **200** is burdensome. In the present embodiment, there is no need to input the registration code RC**2** to the printer **200**, and thus workload of the user can be reduced.

[0072] Notably, the following method can be considered as a comparative example for registering, in the final manner, the device information DI**2** in the server **10** without using the registration code RC**2**. That is, the interim registration request of T**102** does not include the registration code RC**2**, and the device information DI**2** which is registered in the interim manner in T**104** does not include the registration code RC**2** either. Then, in T**130**, the user inputs the serial number SN**2** of the printer **200** to the terminal device **400**, as a result of which, in T**132**, the final registration request including the serial number SN**2** is sent to the server **10** from the terminal device **400**. In this case, the server **10** determines whether or not the serial number SN**2** is registered in the registration table **30**, and in a case of determining that the serial number is registered, the server **10** changes the registration state of the device information DI**2** from the interim registration state to the final registration state. In this regard, as aforementioned, the number of letters constituting the serial number SN**2** is greater than the number of letters constituting the registration code RC**2**. Therefore, it is burdensome for the user to input the serial number SN**2** to the terminal device **400**. Contrary to this, in the present embodiment, since the user simply needs to input the registration code RC**2** which includes the relatively small number of letters to the terminal device **400**, workload of the user can be reduced. Further, the serial number SN**2** includes a number given serially, and thus the serial number SN**2** is easily presumed by a third party who is different from the valid user of the printer. Due to this, in the aforementioned comparative example, the device information DI**2** can be registered in the final manner in the server **10** by the third party. Contrary to this, since the registration code RC**2** is a randomly-set character string, the registration code RC**2** is difficult to be presumed by the third party. Due to this, by using the registration code RC**2** as described in the present embodiment, the final registration of the device information DI**2** by the third party can be prevented.

[0073] Further, in the case of registering the device information DI**2** in the final manner in the registration table **30**, the server **10** sends the completion screen data which represents the completion screen SC**4** including the operation instruction IS**4** to the terminal device **400** (T**136**), and thus the server **10** can cause the user to appropriately perform the registration confirmation operation (T**150**) to the printer **200**. Due to this, the server **10** can register the device information DI**2** in the final manner, and after having received the sending instruction from the printer **200** (T**152**), the server **10** executes the service appropriately. Especially, since the user information UI**2** is associated with the device information DI**2** in the final registration state, the server **10** can appropriately provide the service to the user according to the user information UI**2** (T**168**, T**170**).

[0074] Further, in the case of registering the device information DI**2** in the interim manner, the server **10** registers the access token AT**2** in association with the device information DI**2** (T**154**), and sends the access token AT**2** to the printer **200** (T**156**), as a result of which the server **10** can establish the XMPP connection with the printer **200** (T**158**) by using the access token AT**2**. Due to this, the server **10** can send the remaining amount information request to the printer **200** by using the XMPP connection, as a result of which the server **10** can appropriately receive the remaining amount information from the printer **200**.

[0075] (Exemplary Case B: FIG. **6**)

[0076] Referring to FIG. **6**, another exemplary case B will be described. An initial state of the printer **200** in the present case is the same as that of the case A in FIG. **5**. That is, the printer **200** has not been turned on even once.

[0077] In the present case, before receiving the interim registration request including the registration code, the server **10** receives the final registration request including the registration code. That is, in the registration table **30** of the server **10**, the device information DI**2** is not registered yet when the server **10** receives the final registration request.

[0078] In the case B, without processes same as T**100** to T**106** of FIG. **5** being executed, processes same as T**114** to T**132** of FIG. **5** are executed. Next, in T**190**, since the device information DI**2** is not registered in the registration table **30**, the server **10** determines that the registration code which matches the registration code RC**2** included in the final registration request of T**132** is not registered in the registration table **30** (NO in S**84** of FIG. **3**). In this case, in T**192**, the server **10** sends the error screen data to the terminal device **400** (S**90**).

[0079] In T**194**, the terminal device **400** displays the error screen SC**3**. In this case, the user sees the instruction IS**1** of the error screen SC**3**, and then performs an operation of turning on the power of the printer **200**. This allows the user to appropriately perform an operation for causing the printer **200** to send the interim registration request. That is, in T**200**, the user performs the operation of turning on the power of the printer **200**. As a result, in T**202**, the printer **200** sends the

interim registration request to the server **10**. The subsequent T**204** and T**206** are respectively the same as T**104** and T**106** of FIG. **5**. In T**220**, after having turned on the power of the printer **200**, the user selects the button B**1** of the error screen SC**3**. In this case, in T**222**, the terminal device **400** sends the confirmation instruction to the server **10**.

[0080] When the server **10** receives the confirmation instruction of T**222** from the terminal device **400** (YES in S**92** of FIG. **3**), since the device information DI**2** is registered in the registration table **30** (T**204**), in T**234**, the server **10** determines that the registration code which matches the registration code RC**2** received in T**132** of FIG. **5** is registered in the registration table **30** (YES in S**84**). The subsequent T**236** and T**238** are respectively the same as T**136** and T**138** of FIG. **5**. Afterwards, T**150** and the subsequent processes of FIG. **5** are executed.

[0081] As shown in the case B, in the case where the determination that the registration code RC**2** is not registered is made in T**190**, the user can perform, by seeing the error screen SC**3**, the operation of turning on the power of the printer **200** (T**200**) and select the button B**1** of the error screen SC**3** (T**220**). As a result, the user can register the device information DI**2** in the final manner without inputting the registration code RC**2** again to the terminal device **400**. Due to this, workload of the user can be reduced.

[0082] (Exemplary Case C: FIG. **7**)

[0083] Referring to FIG. **7**, another exemplary case C will be described. An initial state of the printer **200** in the present case is the same as that of the case A of FIG. **5**. In the case C, processes same as T**100** to T**106** of FIG. **5** are executed, and then processes same as T**114** to T**128** of FIG. **5** are executed.

[0084] In T**300**, the terminal device **400** accepts an operation of inputting a registration code RC**4** which is different from the correct registration code RC**2**. In this case, in T**302**, the terminal device **400** sends a final registration request including the registration code RC**4** to the server **10**.

[0085] In a case of receiving the final registration request of T**302** (YES in S**82** of FIG. **3**), in T**304**, the server **10** determines that a registration code which matches the registration code RC**4** is not registered in the registration table **30** (NO in S**84**). The subsequent T**306** and T**308** are respectively the same as T**192** and T**194** of FIG. **6**. In this case, in T**310**, the user sees the instruction IS**2** of the error screen SC**3** and selects the button B**2**. In this case, in T**312**, the terminal device **400** displays the registration screen SC**2**, and in T**330**, accepts the operation of inputting the registration code RC**2**. Then, in T**332**, the terminal device **400** sends the final registration request including the registration code RC**2** to the server **10**. T**334** to T**338** are respectively the same as T**134** to T**138** of FIG. **5**. Afterwards, T**150** and the subsequent processes of FIG. **5** are executed.

[0086] As shown in the case C, in the case where the determination that the registration code RC**4** is not registered is made in T**304**, by seeing the error screen SC**3**, the user can input the correct registration code RC**2** to the terminal device **400** (T**330**). Due to this, the user can register the device information DI**2** in the final manner appropriately.

[0087] (Correspondence Relationships)

[0088] The printer **100** is an example of "communication device". The serial number SN**2** and the model name MN**2** are examples of "identification information". The device information DI**2** is an example of "target information". The interim registration request and the registration code RC**2** of T**102** of FIG. **5** are respectively examples of "first registration request (one of first and second registration requests)" and "first code (one code)". The final registration request and the registration code RC**2** of T**132** are respectively examples of "second registration request (the other one of first and second registration requests)" and "second code (the other code)". The interim registration state and the final registration state are respectively examples of "first registration state" and "second registration state". The shipping of ink of T**168** and the sending of the email of T**170** are examples of "target service". The access token AT**2** is an example of "connection information". At least one of the XMPP connection and the HTTPS connection is an example of "connection". The remaining amount information request of T**160** and the remaining amount information are respectively examples of "information request" and "device-related information". The registration confirmation operation of T**150** and the sending instruction of T**152** are respectively examples of "first predetermined operation" and "related instruction". The completion screen SC**4**, the error screen SC**3** including the instruction IS**1**, and the error screen SC**3** including the instruction IS**2** of FIG. **4** are respectively examples of "first screen", "second screen", and "third screen". The operation of turning on of T**200** of FIG. **6** is an example of "second predetermined operation".

Second Embodiment

[0089] In the present embodiment, a registration code which has been stored in advance in a printer is created from a serial number of the printer. Specifically, when manufacturing the printer, a vender of the printer creates the registration code by encrypting the serial number of the printer according to a predetermined key used in a common key cryptosystem. The common key cryptosystem is a system, such as AES (abbreviation of Advanced Encryption Standard), in which encryption and decryption are executed by a same key. Notably, in a variation, the registration code may be created by encrypting the serial number of the printer according to a predetermined key used in a public key cryptosystem. The public key cryptosystem is a system in which encryption and decryption are executed by different keys.

[0090] (Service Process: FIG. **2**)

[0091] In the present embodiment, a process in the case of YES in S**20** of FIG. **2** is different from that of the first embodiment. In the case of YES in S**20**, the CPU **22** proceeds to S**30**.

[0092] In S**30**, the CPU **22** creates a specific number by decrypting the registration code included in the interim registration request by using a predetermined key. Then, in S**32**, the CPU **22** determines whether or not the specific number and the serial number included in the interim registration request match. In a case of determining that the specific number and the serial number included in the interim registration request match (YES in S**32**), the CPU **22** proceeds to S**22**, whereas in a case of determining that the specific number and the serial number included in the interim registration request do not match (NO in S**32**), the CPU **22** skips S**22** through S**26** and returns to S**10**.

[0093] As mentioned above, the serial number is easily presumed by a third party. Thus, the third party can unrighteously access the server **10**, and register in the interim manner a presumed serial number of an actual printer and an unauthorized registration code in the server **10**. Contrary to

this, in the present embodiment, in the case where the specific number decrypted from the registration code included in the interim registration request and the serial number included in the interim registration request do not match, the device information is not registered in the interim manner in the registration table **30** (NO in S**32** of FIG. **2**). Due to this, the unrighteous registration of the device information in the server **10** by the third party can be prevented.

[0094] (Variation **1**)

[0095] Even in a case where the final registration request is received before the receipt of the interim registration request, the registration code included in the final registration request may be registered in the registration table **30**. For example, in the case of NO in S**84** of FIG. **3**, the CPU **22** may register the registration code included in the final registration request in the registration table **30**. Then, in the case of YES in S**20** of FIG. **2**, the CPU **22** may execute the same determination as in S**84** of FIG. **3**; in the case of YES in S**84**, the CPU **22** may execute S**86** and the subsequence processes of FIG. **3**; and in the case of NO in S**84**, the CPU **22** may execute S**22** and the subsequence processes of FIG. **2**. In the present variation, the final registration request and the interim registration request are respectively examples of "one of first and second registration requests" and "the other of the first and second registration requests".

[0096] (Variation **2**)

[0097] The device information may not be registered in association with the status information in the registration table **30**. For example, the memory **24** may comprise an interim registration area and a final registration area. The CPU **22** may register the device information in the interim manner by storing the device information in the interim registration area, and may register the device information in the final manner by storing the device information in the final registration area.

[0098] (Variation **3**)

[0099] The information received in S**60** of FIG. **2** may not be limited to the remaining amount information. For example, the CPU **22** may receive frequency information indicating a number of times of printing in the printer. In this case, the CPU **22** may send the frequency information by email In the present variation, the frequency information and the sending of the frequency information by email are respectively examples of "device-related information" and "target service".

[0100] (Variation **4**)

[0101] The user information table **28** may not be provided. For example, the server **10** may be a server executing a service that translates text in a print target file into a predetermined language. In this case, after having registered the device information in the final manner, the CPU **22** receives a translation request including a serial number and the print target file from the terminal device, and translates the text in the print target file. Next, the CPU **22** identifies the device information from the serial number included in the translation request, and identifies a printing capability of the printer indicated by a model name included in the identified device information. Afterwards, based on the identified printing capability, the CPU **22** converts the translated file to print data and sends the print data to the printer. In the present variation, the creation and sending of the translated file is an example of "target service". Notably, in another variation, instead of the above-mentioned translation, a predetermined image processing (e.g., correction of white balance, conversion from a color image to a monochrome image, etc.) may be executed to the print target file.

[0102] (Variation **5**)

[0103] Even in a case of not accepting the registration confirmation operation of T**150** after having sent the interim registration request to the server **10**, the printer **200** may periodically send the sending instruction to the server **10**. In this case, the CPU **22** can execute S**102** without executing S**100** of FIG. **3**. Since there is no need for the registration confirmation operation to be performed, workload of the user can be reduced. Notably, in the present variation, the printer **200** needs to send the sending instruction periodically to the server **10**, and thus processing load of the printer **200** can be increased. Contrary to this, in the first and second embodiments, the printer **200** sends the sending instruction to the server **10** in response to accepting the registration confirmation operation. Due to this, processing load of the printer **200** can be reduced.

[0104] (Variation **6**)

[0105] The CPU **22** may not execute S**90** and S**92**. For example, in the case of NO in S**84** in FIG. **3**, the CPU **22** may send error data representing an error screen that does not include the instructions IS**1** and IS**2**. p (Variation **7**)

[0106] In S**104** of FIG. **3**, the CPU **22** may send an identifier used in HTTP (abbreviation of Hyper Text Transfer Protocol) Cookie to the printer, instead of sending the access token. In this case, the CPU **22** ends the final registration process of FIG. **3** without executing S**106** and S**108**. Further, in S**60**, in response to receiving the identifier from the printer, the CPU **22** may establish the HTTP connection with the printer and receive the remaining amount information via the connection. In another variation, in S**104**, the CPU **22** may send a specific URL (abbreviation of Uniform Resource Locator) to the printer, and end the final registration process of FIG. **3** without executing S**106** and S**108**. Further, in S**60**, in response to receiving, from the printer, the connection request with the URL as a destination, the CPU **22** may establish the HTTP connection with the printer, and receive the remaining amount information via the connection. In the present variation, the identifier or the specific URL is an example of "connection information".

[0107] (Variation **8**)

[0108] Instead of S**30** of FIG. **2** in the second embodiment, the CPU **22** may create a specific code by encrypting the serial number included in the interim registration request by using a predetermined key. In this case, in S**32**, the CPU **22** may determine whether or not the created specific code and the registration code included in the interim registration request match.

[0109] (Variation **9**)

[0110] "Communication device" may not be limited to a printer, and may be a scanner, a multifunction device, a facsimile machine, or the like. For example, in a case where the "communication device" is a scanner, the server **10** receives frequency information indicating a number of times of scan from the scanner and sends the frequency information by email, which is an example of "target service".

What is claimed is:

1. A non-transitory computer-readable medium storing computer-readable instructions for a server,

the computer-readable instructions, when executed by a processor of the server, causing the server to execute:

receiving a first registration request including identification information for identifying a communication device and a first code from the communication device via the Internet, the first code having been stored in advance in the communication device without being inputted into the communication device by a user of the communication device;

in a case where a second code is inputted into a terminal device different from the communication device by the user, receiving a second registration request including the second code from the terminal device via the Internet;

in a case where one of the first and second registration requests is received, registering target information including one code included in the one of the first and second registration requests in a memory such that a registration state of the target information is to be a first registration state, the first registration state being a state where the server does not perform a target service which is related to the communication device;

in a case where the other one of the first and second registration requests is received after the target information has been registered in the memory, determining whether the other code included in the other one of the first and second registration requests matches the one code included in the target information;

in a case where it is determined that the other code matches the one code, changing the registration state of the target information from the first registration state to a second registration state, the second registration state being a state where the server performs the target service which is related to the communication device identified by the identification information included in the target information, wherein in a case where it is determined that the other code does not match the one code, the registration state of the target information is not changed from the first registration state to the second registration state; and

in a case where the registration state of the target information is changed to the second registration state, performing the target service which is related to the communication device identified by the identification information included in the target information.

2. The non-transitory computer-readable medium as in claim **1**, wherein

the first registration request is received when both conditions of the communication device being connected to the Internet and electrical power being supplied to the communication device are fulfilled.

3. The non-transitory computer-readable medium as in claim **1**, wherein

the computer-readable instructions, when executed by the processor, cause the server to further execute:

receiving user information which is related to the user via the Internet from the terminal device; and

registering the received user information in the memory,

wherein in the first registration state, the user information is not associated with the target information,

in the second registration state, the user information is associated with the target information, and

the target service is performed by using the user information.

4. The non-transitory computer-readable medium as in claim **1**, wherein

the one of the first and second registration requests is the first registration request,

the one code is the first code,

the other one of the first and second registration requests is the second registration request, and

the other code is the second code, and

wherein the computer-readable instructions, when executed by the processor, cause the server to further execute:

in a case where it is determined that the second code matches the first code, sending, to the terminal device, first screen data representing a first screen for encouraging the user to perform a first predetermined operation on the communication device, the first predetermined operation being for causing the communication device to send a related instruction which is related to the target service to the server,

wherein the target service is performed after the registration state of the target information has been changed to the second registration state and the related instruction has been received from the communication device.

5. The non-transitory computer-readable medium as in claim **1**, wherein

the one of the first and second registration requests is the first registration request,

the one code is the first code,

the other one of the first and second registration requests is the second registration request, and

the other code is the second code,

wherein the computer-readable instructions, when executed by the processor, cause the server to further execute:

in a case where it is determined that the second code does not match the first code, sending, to the terminal device, second screen data representing a second screen for encouraging the user to input a code different from the second code into the terminal device.

6. The non-transitory computer-readable medium as in claim **1**, wherein

the one of the first and second registration requests is the first registration request,

the one code is the first code,

the other one of the first and second registration requests is the second registration request, and

the other code is the second code,

wherein the computer-readable instructions, when executed by the processor, cause the server to further execute:

in a case where the second registration request is received before the first registration request is received and the target information is registered in the memory, sending, to the terminal device, without registering the target information including the second code in the memory, third screen data representing a third screen for encouraging the user to perform a second predetermined operation on the communication device, the second predetermined operation being for causing the communication device to send the first registration request to the server.

7. The non-transitory computer-readable medium as in claim **1**, wherein

the computer-readable instructions, when executed by the processor, cause the server to further execute:

in a case where the registration state of the target information is changed from the first registration state to the second registration state, registering, in association with the target information, connection information for establishing a connection via the Internet between the server and the communication device;

sending the connection information to the communication device; and

establishing the connection via the Internet between the server and the communication device by using the connection information after the connection information has been sent to the communication device,

wherein the target service includes executing a communication with the communication device by using the established connection.

8. The non-transitory computer-readable medium as in claim **7**, wherein

the target service includes:

sending, to the communication device by using the established connection, an information request for requesting device-related information which is related to the communication device; and

receiving the device-related information from the communication device in response to sending the information request.

9. The non-transitory computer-readable medium as in claim **1**, wherein

the computer-readable instructions, when executed by the processor, cause the server to further execute:

in a case where the first registration request is received, determining, by using the identification information and the first code, whether the first code is a code which has been created from the identification information,

wherein in a case where it is determined the first code is the code which has been created from the identification information, the determining of whether the second code matches the first code is executed, and

in a case where it is determined the first code is not the code which has been created from the identification information, the determining of whether the second code matches the first code is not executed.

10. A server comprising:

a processor; and

a memory configured to store computer-readable instructions therein, the computer-readable instructions, when executed by the processor, causing the server to perform:

receiving a first registration request including identification information for identifying a communication device and a first code from the communication device via the Internet, the first code having been stored in advance in the communication device without being inputted into the communication device by a user of the communication device;

in a case where a second code is inputted into a terminal device different from the communication device by the user, receiving a second registration request including the second code from the terminal device via the Internet;

in a case where one of the first and second registration requests is received, registering target information including one code included in the one of the first and second registration requests in a memory such that a registration state of the target information is to be a first registration state, the first registration state being a state where the server does not perform a target service which is related to the communication device;

in a case where the other one of the first and second registration requests is received after the target information has been registered in the memory, determining whether the other code included in the other one of the first and second registration requests matches the one code included in the target information;

in a case where it is determined that the other code matches the one code, changing the registration state of the target information from the first registration state to a second registration state, the second registration state being a state where the server performs the target service which is related to the communication device identified by the identification information included in the target information, wherein in a case where it is determined that the other code does not match the one code, the registration state of the target information is not changed from the first registration state to the second registration state; and

in a case where the registration state of the target information is changed to the second registration state, performing the target service which is related to the communication device identified by the identification information included in the target information.

11. A method performed by a server,

the method comprising:

receiving a first registration request including identification information for identifying a communication device and a first code from the communication device via the Internet, the first code having been stored in advance in the communication device without being inputted into the communication device by a user of the communication device;

in a case where a second code is inputted into a terminal device different from the communication device by the user, receiving a second registration request including the second code from the terminal device via the Internet;

in a case where one of the first and second registration requests is received, registering target information including one code included in the one of the first and second registration requests in a memory such that a registration state of the target information is to be a first registration state, the first registration state being a state where the server does not perform a target service which is related to the communication device;

in a case where the other one of the first and second registration requests is received after the target information has been registered in the memory, determining whether the other code included in the other one of the first and second registration requests matches the one code included in the target information;

in a case where it is determined that the other code matches the one code, changing the registration state of the target information from the first registration state to a second registration state, the second registration state being a state where the server performs the target service which is related to the communication device identified by the identification information included in the target information, wherein in a case where it is determined that the other code does not match the one code, the registration state of the target information is

not changed from the first registration state to the second registration state; and

in a case where the registration state of the target information is changed to the second registration state, performing the target service which is related to the communication device identified by the identification information included in the target information.

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